

## Orthopteroid Bioblitz Results

By Gretchen Baker, Great Basin National Park

On June 26 and 27, 2010, Great Basin National Park held its second annual Bioblitz, a short-term event to help discover the biodiversity of the park. For 2010, the Bioblitz focus was on Orthopteroids: crickets, grasshoppers, and related insects. The park previously had no documented species for orthopteroids. Twenty-four people attended, including representatives from the Nevada Department of Agriculture; Dixie State College in St. George, Utah; Southern Utah University in Cedar City, Utah; Utah Department of Natural Resources; and the Forest Service Forest Health Laboratory in Ogden. Volunteers also came from California, Oregon, Utah, and Nevada to assist. Attendees spent 275 hours during the weekend to help inventory the park.

During the 24-hour collecting period, approximately 150 orthopteroids were collected, with roughly half of those adults. Dr. Andrew Barnum from Dixie State College (Figure 1) provided identification of the specimens collected. Due to his expertise with orthopteroids, he was able to identify over 40 specimens at the event, providing nine species names and two family names. He took the specimens back to his lab and provided a final identification (Table 1).



Figure 1. Dr. Andrew Barnum

Table 1. Orthopteroids identified at 2010 BioBlitz in Great Basin National Park.

Family	Subfamily	Genus	Species	Subspecies	Authority	Common Name
Acridadae	Gomphocerinae	<i>Amphitornus</i>	<i>coloradus</i>	<i>saltator</i>	Hebard	Striped Slantfaced Grasshopper
Acridadae	Gomphocerinae	<i>Paropomala</i>	<i>wyomingensis</i>		Thomas	Wyoming Toothpick Grasshopper
Acridadae	Gomphocerinae	<i>Psoloessa</i>	<i>delicatula</i>		Sudder	Brown-spotted Range Grasshopper
Acridadae	Melanopliinae	<i>Melanoplus</i>	<i>sanguinipes</i>	<i>sanguinipes</i>	Fabricius	Migratory Grasshopper
Acridadae	Oedipodinae	<i>Arphia</i>	<i>conspersa</i>		Scudder	Speckle-winged Rangeland Grasshopper
Acridadae	Oedipodinae	<i>Circotettix</i>	<i>undulata</i>		Thomas	Undulant-winged Grasshopper
Acridadae	Oedipodinae	<i>Cratypedes</i>	<i>lateritius</i>		Saussure	Nevada Red-winged Grasshopper
Acridadae	Oedipodinae	<i>Cratypedes</i>	<i>neglecta</i>		Thomas	Pronotal Range Grasshopper
Acridadae	Oedipodinae	<i>Trimerotropis</i>	<i>pallidipennis</i>		Burmeister	Pallid-winged Grasshopper
Acridadae	Oedipodinae	<i>Trimerotropis</i>	<i>pseudofasciata</i>		Scudder	Crackling Forest Grasshopper
Acridadae	Oedipodinae	<i>Trimerotropis</i>	<i>verruculatus</i>	<i>suffusa</i>	Scudder	Crackling Forest Grasshopper
Gryllidae	Gryllinae	<i>Gryllus</i>	<i>assimilis</i>		Fabricius	Jamaican field cricket
Tettigoniidae	Tettigoniinae	<i>Steiroxys</i>	<i>pallidpalpus</i>		Thomas	Pale-palped shieldback
Mantidae	Amelinae	<i>Litaneutria</i>	<i>minor</i>		Scudder	Agile ground mantis
Mantidae	Mantinae	<i>Stagmomantis</i>	<i>californica</i>		Rehn & Hebard	California Mantis

About 40 percent of the adult orthopteroids were speckle-winged rangeland grasshoppers (*Arphia conspersa*; Figure 2), found from 6,800 to 9,200 feet elevation. Habitat was searched from 5,300 to 11,900 feet for orthopteroids, with the bulk of those caught between 5,300 and 8,500 feet.

One species was only found over 10,000 feet elevation. Habitat data was collected at the same time as the orthopteroids, which will allow for further analysis about which conditions are most favorable to them.

The park would like to extend special thanks to Dr. Barnum for dedicating his time to help the park develop a baseline list of Orthopteroids. The Southern Utah University entomology club and Nevada Department of Agriculture provided field equipment for the event.



Figure 2. One of the specimens collected during the Bioblitz, probably *Arphia conspersa*.